

WHAT IS CLAIMED IS:

Sub B1

1. A fluidic spray system for producing low momentum liquid droplets comprising in combination, a fluidic oscillator coupled to a supply of liquid under pressure and a vortex valve immediately upstream of said fluidic oscillator.

5

2. A fluidic spray system for producing a liquid spray in which the spray droplets have a low momentum and allows wide angle sprays to be delivered to a selected surface area without bouncing off of said selected surface, comprising, a fluidic oscillator connectable by a flow path reverser to a source of liquid under pressure and wherein said fluidic oscillator is selected from:

- a multiple power nozzle oscillator,
- a reversing chamber oscillator, and
- a feedback oscillator.

10

3. A fluidic spray system defined in claim 2 including a non-restrictor pressure reducer upstream of said fluidic oscillator.

4. The fluidic spray system defined in claim 3 wherein said non-restrictor pressure reducer is a vortex valve.

15

sub B1

20

5. The fluidic spray system defined claim 4 wherein said fluidic spray nozzle includes a first and second two-sided molded chip having a fluidic oscillator formed in said first side and a feed circuit formed in said second side, and reducing pressure by feeding liquid from said first side to said second side, and said flow reverser reversing the direction of liquid flow thereof.

10016151 121701

6. A fluidic spray system for producing a liquid spray in which the spray droplets have a low momentum and allows substantially unrestricted flows to be delivered to a point of utilization on a surface comprising a fluidic oscillator having an input coupled to a supply of liquid under pressure and a vortex valve immediately upstream of said fluidic oscillator, said vortex valve having an output which is connected to the input of said fluidic oscillator.

10

7. A fluidic oscillator spray system for producing a liquid spray in which the spray droplets have a low momentum and allows for producing droplets of larger diameters and a narrower range of diameters for similar operating pressures.

15

8. A method for producing low energy spray droplets which are adapted to adhere to a surface comprising, providing a fluidic spray nozzle connectable to a source of liquid under pressure, reducing the velocity of spray

droplets issuing from said fluidic spray nozzle so that said spray droplets do not bounce off said surface.

9. The method defined in claim 8 wherein said fluidic spray nozzle is selected from the following:

- (a) low frequency multiple power nozzle oscillator,
- (b) a filter and reversing chamber oscillator,
- (c) a vortex chamber feeding a fluidic oscillator.

10. The method defined in claim 8 wherein said fluidic spray nozzle includes a first and second two-sided molded chip having a fluidic oscillator formed in said first side and a feed circuit formed in said second side, and reducing pressure by feeding liquid from said first side to said second side, and reversing the direction of liquid flow thereof.